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# Project Proposal

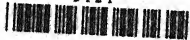
FORMAL - INFORMAL SECTOR LINKAGES  
(With special reference to transfer  
of technology and skills)

A PROJECT PROPOSAL

T. S. Papola

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## I. INTRODUCTION : STATEMENT OF THE PROBLEM

Since the concept of "Informal Sector" was used by ILO/UNDP Employment Commission to Kenya, both as an analytical tool and a policy instrument, there has been a spate of writings on the subject. Most of the studies have attempted to assess the role of informal sector in the development process of the developing countries. The interest is particularly heightened on account of the suppositions that this sector can be an effective tool for a better distribution of the gains of development; that it has greater capacity to absorb unutilised labour force; and, that the incomes generated in this sector tend to go into the hands of relatively less privileged sections of the population. These strengths of the informal sector would, however, vary not only among different countries and geographical units, but also between different kinds of activities.

One of the most important points which has generally been missed in most of the discussions on the subject is the fact that most of the informal sector activities are very closely linked with and, to a very large extent, dependent on the formal sector. The studies have tended to high-light the importance and potential of the informal sector not always taking account of this aspect.

The inter-relationships between the two sectors are most significantly manifest in two types of linkages : market and technological. On the basis of the market, the informal sector units can be broadly classified into three categories: (i) Those producing for a market different from that of the formal sector units, (ii) Those competing with the formal sector units in the same market, and (iii) Those whose market primarily consists of the formal sector units themselves. The three types of market relationships have obviously different implications for the technological linkages between the two sectors. One would generally believe that the extent of transfer of technology and skills would be largest in the last case and probably the smallest in the first case. And of-course, the method and the form in which the transfer takes place will also be different in the three cases.

Generally, the transfer of technology is expected to take one or more of the following forms: (i) equipments, (ii) technical know-how, and (iii) skills. The various methods



followed in transferring technology could be (i) sub-contracting arrangements, (ii) sale or hire of machinery, (iii) use of the training programmes of the formal units by the informal sector units, and (iv) deputation of skilled employees from formal to the informal units.

It is obvious that the need to encourage transfer of technology and its effectiveness will very much depend on the relationship which the informal sector market has with that of the formal sector units and the form and the method in which the technology is transferred. A correct appraisal of the role of informal sector, in terms of its capacity to generate employment and ensure social justice, therefore, requires, a framework wherein these linkages and interdependence are made a central part of the study. Moreover, the technology being only one of the various inputs that go into the production process and effective performance of a unit, the other factors such as the entrepreneurial abilities, availability of finance, government policy, etc. need to be brought in for a realistic analysis.

## II: OBJECTIVES

It is within the above framework that we propose to make a study of the formal-informal sector linkages in the manufacturing activities. The major focus of this study will be on the following aspects :

1. An assessment of the extent to which the transfer of technology and skills is taking place from the formal sector to the informal sector units.
2. To identify the forms, processes and methods of the transfer of technology and skills.
3. To identify the constraints and facilitating circumstances in the process of transfer.
4. To examine the effectiveness of the transfer in terms of the performance of the informal sector units which have received the technology from the formal sector units.
5. To identify the lines of production which could economically be carried out in the informal sector with the help of the technology transfer from the formal sector units.

6. To derive policy implications for the growth of informal sector with particular reference to the contribution that the transfer of technology from the formal sector can make in this process.

### III: THE LOCALE OF THE STUDY

The study is proposed to be conducted in Kanpur which is one of the oldest and largest industrial centres in Northern India. With a population of over 1.2 million, it is the most populous city in the State of Uttar Pradesh. It is also the most industrialised city of the State with over 150,000 workers engaged in the manufacturing activity, making slightly less than ten percent of the State's total employment in this sector. Of the large scale manufacturing activity defined in terms of employment in units employing 50 workers or more, Kanpur contributes about one-third of the total of all the 55 districts in the State. Kanpur has 35 factory workers per 1000 persons as compared to the State average of around 4. The information about its industrial structure is given in the Appendix Table.

### IV: SCOPE

For the purpose of this study, we propose to select the Metal Engineering group of industries in Kanpur city. This group consists of the following two-digit industries :

- 34 : Basic metals
- 35 : Metal products
- 36 : Machinery
- 37 : Electrical machinery
- 38 : Transport equipments.

These groups of industries together contribute about 21 per cent of the total manufacturing employment in Kanpur city. The other important industries in Kanpur are Textiles and Food and Beverages with 28 per cent and 12 per cent of employment respectively. In either of them the technological linkages between the formal and the informal sectors are not likely to be strong. Further, Textiles are highly dominated by formal sector units: about 90 per cent of its employment in Kanpur city is in the large scale units. Food and Beverages on the other hand, are to be found mainly in the

informal sector : nearly 70 per cent of employment in this industry in the city is to be found in the informal sector units. In the Metal Engineering group of industries there is a fair distribution of total employment between the formal and informal sector units: of the total employment of around 31,600 workers in this group 55 per cent is to be found in over 4,000 informal sector units; and, 45 per cent in about 250 formal sector units. It is also one of those industry groups in which one expects to find strong and wide-spread technological linkages between the large and small units. It is on these bases that our choice has gone in favour of the Metal Engineering group of industries.

#### V: METHODOLOGY

The informal sector is identified, for the purposes of the present study, to consist of all units operated on a household basis and all such non-household units which employ less than 10 workers.

We intend to undertake this study on the basis of a primary survey both in the formal and informal sectors. A primary survey is essential due to the virtual non-existence of information useful for the purpose of our study. We propose to select about 400 units in the informal sector from each of which information on various aspects of their functioning with particular focus on the use of technology transferred from any formal sector unit and constraints, if any, on this process, will be collected personally with the help of a structured questionnaire. So far as the formal sector units are concerned we propose to survey all of them (about 250) on the limited question of transfer of technology alone.

A sub-sample of about 25 such formal sector units which are found to have effected transfer of technology to the informal sector units will be studied in depth.



APPENDIX  
INDUSTRIAL STRUCTURE OF KANPUR

Industry	Total no. of workers in household & non-household industry	Workers in house- hold industry		Workers in units employing less than ten persons		Informal se- ctor employ- ment	
		Number	% of 2	Number	% of 2	Number	% of 2
1	2	3	4	5	6	7	8
20-21: Food and Beverages	18110 (11.78)	8069	44.56	4262	23.53	12331	68.09
22: Tobacco Products	646 (0.42)	217	33.59	146	22.60	336	56.19
23: Textiles	43063 (28.01)	4365	10.14	551	1.28	4916	11.42
24: Footwear	7869 (5.12)	1358	17.26	17	0.22	1375	17.46
25: Wood & Cork products	3292 (2.14)	66	2.00	14	0.43	80	2.43
26: Furniture & Fixture	5712 (3.72)	1	0.02	4467	78.20	4468	78.22
27: Paper & Paper products	9166 (5.96)	7138	77.87	1329	14.50	8467	92.37
28: Printing & Publishing	7753 (5.04)	5805	74.87	1193	15.39	6998	90.26
29: Leather & leather products	8253 (5.37)	126	1.53	1954	23.68	2080	25.20
30: Rubber products	1406 (0.91)	441	31.37	310	22.05	751	53.41
31: Chemicals	7139 (4.64)	4278	59.92	454	6.36	4732	66.28
32: Petroleum & Coal products	1071 (0.70)	257	24.00	178	16.62	435	40.62
33: Non-metallic and Mineral products	2300 (1.50)	1810	78.68	151	6.56	1961	85.24
34: Basic Metals 35: Metal products	18173 (11.82)	4263	23.45	5606	30.83	9869	54.28

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## Appendix (contd.)

INDUSTRIAL STRUCTURE OF KANPUR

1	2	3	4	5	6	7	8
36 : Machinery	6310 ( 4.10)	4753	71.20	246	3.70	4999	74.90
37 : Electrical Machinery	4154 ( 2.70)	131	3.15	259	6.23	390	9.38
38 : Transport Equipment	2597 ( 1.69)	611	23.53	1434	55.22	2045	78.75
Metal Engineering Group: 34-38:	31594 (20.55)	9758	30.88	7545	23.88	17303	54.76
39 : Miscellaneous	6792 ( 4.42)	2701	39.77	3251	47.87	5952	87.64
Divisions 2 & 3; All Industries	153733 (100.00)	46390	30.18	10222	6.65	56612	36.83